12 BIOLOGICAL RESOURCES

This chapter describes the existing biological resources found at the Patterson mine site. The purpose of this analysis is to present the current setting and evaluate the anticipated effects of the proposed mine expansion project on biological resources.

Information presented in this chapter was collected during onsite field surveys and by reviewing existing documentation. Biologists conducted numerous surveys on the project site between 1996 and 2001. The original field surveys were conducted by Jeff Glazner during 5 days in August and September 1996. Numerous surveys were conducted by Mr. Glazner and North Fork Associates biologists from 1997 through July 2000. These surveys included surveys for the presence of both elderberry shrubs and evidence of valley elderberry longhorn beetle (VELB); a wetland delineation; and an evaluation of sensitive biological resources, including special-status plant and wildlife species, observed or potentially occurring within the project area. In November and December 1998, and again in July 2001, EDAW biologists conducted reconnaissance-level surveys to verify the information collected by Mr. Glazner and North Fork Associates.

Reports that address the biological resources on the project site include:

- *Biological Resources Report for the Patterson Sand and Gravel/Damon Orchard Expansion Area* (Glazner 1996a);
- *Draft Mine Reclamation Plan for Patterson Sand and Gravel, Camp Far West Road, Sheridan, Placer and Yuba Counties, California* (Carlton Engineering, Inc., 2003);
- *Patterson Sand & Gravel Mine Reclamation Plan Addendum: Biological Mitigation and Agricultural Reclamation Areas* (Carlton Engineering, Inc., 2004);
- *Conceptual Woodland Mitigation Plan for the Patterson Sand and Gravel Expansion* (North Fork Associates 2004);
- *Patterson Sand and Gravel/Damon Estate Wetland Delineation (West Area)* (Glazner 1996b);
- *Patterson Sand & Gravel Revised Biological Mitigation Plan* (North Fork Associates 2001b);
- *Patterson Sand & Gravel Valley Project, Nationwide Permit 12* (North Fork Associates 2001c);
- *Biological Resources Assessment for the Patterson Sand & Gravel Damon Orchard Expansion Area* (North Fork Associates 2000a); and
- *Valley Elderberry Longhorn Beetle Mitigation Plan for the Patterson Sand & Gravel/Damon Orchard Expansion Area* (North Fork Associates 2000b).

12.1 EXISTING CONDITIONS

GENERAL BIOLOGICAL RESOURCES

This section describes the habitat types present on the project site and the common plant and wildlife species associated with these habitats.

VEGETATION

Vegetation on undisturbed portions of the 884-acre project site is typical for natural floodplains in this region of California. Oak woodland covers approximately 184 acres of the project site (Exhibit 12-1). Riparian, open water, and riverine habitat associated with the Bear River covers approximately 113 acres. The project site also includes approximately 261 acres of agriculture (i.e., walnut orchards and rice fields) and 326 acres of active mining and processing areas.

Most of the oak woodland on the project site is valley oak woodland that is dominated by mature valley oaks (*Quercus lobata*). Common plant species associated with valley oak woodland on the project site include Northern California black walnut (*Juglans californica hindsii*), Oregon ash (*Fraxinus latifolia*), California coffeeberry (*Rhamnus californica*), California rose (*Rosa californica*), and blue elderberry (*Sambucus mexicana*). Cottonwood trees (*Populus fremontii*) are also found in some locations in the valley oak woodland habitat. However, the majority of the cottonwoods on the project site are located along the edge of the Bear River and along historic channels of the river. One notable stand of cottonwoods is found along the southern edge of the existing walnut orchard adjacent to the southern expansion area. This area represents approximately 3 acres of what is considered riparian woodland. Non-native plant species noted in the valley oak woodland include black locust (*Robinia pseudoacacia*), tree of heaven (*Ailanthus altissima*), and Himalayan blackberry (*Rubus discolor*). Vines are common in certain areas, especially pipevine (*Aristolochia californica*) and California wild grape (*Vitus californica*). Poison oak (*Toxicodendron diversilobum*) is present in some portions of the site. The herbaceous understory and openings in the valley oak woodland canopy support sedges (*Carex* spp.) and non-native grassland species including wild oats (*Avena barbata*), rye (*Lolium perenne*), and barley species (*Hordeum* spp.). The understory also includes native deergrass (*Muhlenbergia rigens*) in several areas.

Two other oak-dominated plant communities occur on the project site. Valley oak–interior live oak woodland is characterized by a dense stand of large trees in which valley oak and interior live oak trees (*Quercus wislizenii*) are co-dominant. This habitat type occupies a position intermediate between the areas dominated by valley oak and those of slightly higher elevation and different soil type referred to as interior live oak–foothill pine/white-leaf manzanita woodland. The latter community is dominated by an open mix of interior live oak and foothill pine (*Pinus sabiniana*), and white leaf manzanita (*Arctostaphylos viscida*). Many of the shrubs and small trees described under valley oak woodland are also found in the valley oak–interior live oak woodland, but because of the mostly closed canopy, there is significantly less grassy ground cover. The oak woodland along the northern border of the project area is more open than that found elsewhere. Much of the area is currently grazed and this appears to be limiting reproduction of oaks and other woody vegetation. Much of the herbaceous vegetation

Exhibit 12-1
COLOR FOLD OUT

12-1 BACK OF PAGE

associated with these upland oak woodland communities is composed of non-native and weedy species including Himalayan blackberry, yellow star thistle (*Centaurea solstitialis*), wild oats, ripgut brome (*Bromus diandrus*), telegraph weed (*Heterotheca grandiflora*), and filaree (*Erodium botrys*).

WILDLIFE

Oak woodland in general, and riparian oak woodland in particular, is considered important habitat for wildlife and typically supports high wildlife diversity. The oak woodland on the project site provides foraging and breeding habitat for numerous wildlife species, including some special-status species. The riverine and riparian habitats supported by the Bear River are also considered important wildlife habitats.

Many wildlife species were observed on the project site during reconnaissance-level surveys. Reptiles and amphibians encountered during field surveys include Pacific chorus frog (*Hyla regilla*) and western fence lizard (*Sceloporus occidentalis*). Year-round resident birds observed include red-tailed hawk (*Buteo jamaicensis*), western scrub-jay (*Aphelocoma californica*), oak titmouse (*Baeolophus inornatus*), wild turkey (*Meleagris gallopavo*), Nuttall's woodpecker (*Picoides nuttallii*), California towhee (*Pipilo crissalis*), Bewick's wren (*Thryomanes bewickii*), and bushtit (*Psaltriparus minimus*). Migratory birds observed included yellow-rumped warbler (*Dendroica coronata*), ash-throated flycatcher (*Myiarchus cinerascens*), ruby-crowned kinglet (*Regulus calendula*), fox sparrow (*Passerella iliaca*), and cedar waxwing (*Bombycilla cedrorum*). Mammals detected visually or by tracks include racoon (*Procyon lotor*), western gray squirrel (*Sciurus griseus*), and mule deer (*Odocoileus hemionus*).

SENSITIVE BIOLOGICAL RESOURCES

SPECIAL-STATUS SPECIES

Special-status species are defined as plants and animals that are:

- legally protected under the California Endangered Species Act (CESA) or the federal Endangered Species Act (ESA) or under other regulations (see Section 12.2, Regulatory Background);
- considered sufficiently rare by the scientific community to qualify for such listing; or
- considered sensitive because they are unique, declining regionally or locally, or at the extent of their natural range.

Specifically, special-status plant species include:

- plants listed or proposed for listing as threatened or endangered under ESA (50 CFR 17.12 for listed plants and various notices in the Federal Register [FR] for proposed species);
- plants that are candidates for possible future listing as threatened or endangered under ESA (64 FR 205:57533–57547, October 25, 1999);

- plants that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines §15380);
- plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered" in California (Lists 1B and 2 in Skinner and Pavlik [1994]);
- plants listed or proposed for listing by the State of California as threatened or endangered under CESA (14 CCR 670.5);
- plants listed under the California Native Plant Protection Act (California Fish and Game Code §1900 *et seq.*);
- plants considered sensitive by other federal agencies (i.e., the U.S. Forest Service [USFS], the U.S. Bureau of Land Management [BLM]) or state and local agencies or jurisdictions; and
- plants considered sensitive or unique by the scientific community or occurring at the limits of their natural range (State CEQA Guidelines Appendix G).

Special-status wildlife species include:

- animals listed or proposed for listing as threatened or endangered under ESA (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species);
- animals that are candidates for possible future listing as threatened or endangered under ESA (54 CFR 554);
- animals that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines §15380);
- animals listed or proposed for listing by the State of California as threatened or endangered under CESA (14 CCR 670.5);
- animal species of special concern to the California Department of Fish and Game (CDFG) (Remsen [1978] for birds; Williams [1986] for mammals) or to USFWS; and
- animal species that are fully protected in California (California Fish and Game Code §3511 [birds], §4700 [mammals], and §5050 [reptiles and amphibians]).

CESA and ESA are defined, and a more comprehensive discussion of legal protections of biological resources is provided, in Section 12.2, Regulatory Background.

For purposes of this proposed project, the California Natural Diversity Data Base (CNDDB) (CDFG 2003) was queried for the Camp Far West topographic quadrangle on which the project site is located, as well as for adjacent quadrangles, to determine whether any sensitive plant and/or wildlife species have

been reported to occur in the project vicinity. Maintained by CDFG, the CNDDB contains occurrence records for both state listed and federally listed species, as well as for other species considered by CDFG to be of special concern. Information in the CNDDB is derived from a number of sources including agency biologists, environmental consultants, university herbaria, scientific researchers and publications, and organizations such as CNPS and the Audubon Society. It is important to note that the CNDDB contains records only for those species occurrences that have been recorded and reported; it is not a comprehensive and complete record of species occurrence and distribution.

Searches of the Camp Far West and adjacent quadrangles resulted in records for a number of special-status plant and wildlife species. Based on the results of previous biological studies and habitat suitability assessments completed by EDAW, a number of special-status wildlife species were identified as having some potential to occur onsite (Table 12-1). Special-status species for which suitable habitat is present on the project site are discussed below.

Table 12-1
Special-status Species Potentially Occurring in the Project Area

SPECIES	Federal	State	HABITAT	POTENTIAL FOR OCCURRENCE
INVERTEBRATES				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T	-	Elderberry shrubs.	Evidence indicating presence found onsite.
FISH				
Central Valley spring-run chinook salmon *Oncorhynchus tshawytscha*	T	T	Bear River.	Likely to occur.
Central Valley fall-run chinook salmon *Oncorhynchus tshawytscha*	-	CSC	Bear River.	Likely to occur.
Central Valley steelhead trout *Oncorhynchus mykiss*	T	-	Bear River.	Likely to occur.
REPTILES				
Western pond turtle *Clemmys marmorata*	FSC	CP	Perennial wetlands and slow-moving creeks and ponds with overhanging vegetation for basking sites.	May occur in freshwater ponds and adjacent uplands.

Table 12-1
Special-status Species Potentially Occurring in the Project Area

SPECIES	Federal	State	HABITAT	POTENTIAL FOR OCCURRENCE
BIRDS				
California black rail *Laterallus jamaicensis coturniculus*	FSC	ST, CP	Coastal and freshwater marshes.	Not recorded in vicinity of project site and not expected to occur. Nearest known populations are located east of Marysville.
White-tailed kite *Elanus caeruleus*	-	CP	Herbaceous and open stages of most habitats. Grasslands and agricultural areas used for foraging; typically nests in tops of dense oak, willow, or other tree stands.	Non-native grasslands onsite represent suitable foraging habitat, and oak woodland represents appropriate nesting habitat. Not observed onsite.
Golden eagle *Aquila chrysaetos*	-	CSC CP	Grasslands for foraging; secluded cliffs with overhanging ledges or large trees in open areas for nesting.	Non-native grasslands represent suitable foraging habitat; however, no suitable nesting habitat within the project site. Not observed onsite.
Northern harrier *Circus cyanus*	-	CSC	Non-native annual grasslands and marsh.	Non-native grasslands represent suitable nesting and foraging habitat. Not observed onsite.
Swainson's hawk *Buteo swainsoni*	-	T	Riparian woodland for nesting and grasslands for foraging.	Suitable nesting habitat in oak woodland. Low-quality foraging habitat. Not observed onsite.
Cooper's hawk *Accipiter cooperii*	-	CSC	Dense stands of oak and riparian woodland for nesting, grasslands for foraging.	Suitable nesting habitat in valley oak woodland. Non-native grasslands represent suitable foraging habitat. Observed onsite.
Sharp-shinned hawk *Accipter striatus*	-	CSC	Riparian woodland for nesting, grasslands for foraging.	Potential winter visitor. Non-native grasslands onsite represent suitable foraging habitat. Not observed onsite.
Burrowing owl *Speotyto cunicularia*	FSC	CSC	Non-native grasslands, agricultural fields.	Non-native grasslands represent suitable foraging and breeding habitat. Not observed onsite.

Table 12-1
Special-status Species Potentially Occurring in the Project Area

SPECIES	Federal	State	HABITAT	POTENTIAL FOR OCCURRENCE
Loggerhead shrike *Lanius ludovicianus*	FSC	CSC	Grasslands for foraging, oak woodland for nesting.	Suitable foraging habitat in the non-native grasslands and nesting habitat in the oak woodlands. Not observed onsite.
Bank swallow *Riparia riparia*	-	T	Riparian areas with vertical cliffs and banks with fine-textured or sandy soil, into which it digs holes to nest.	A small nesting colony (i.e., approximately 25 nesting pairs) was found in 2000 on the bank above the Bear River on the project site.
Tricolored blackbird *Agelaius tricolor*	FSC	CSC	Freshwater marsh with dense cattails and tules for nesting, grasslands for foraging.	No appropriate nesting habitat onsite, but non-native grasslands represent suitable foraging habitat.
Yellow-breasted chat *Icteria virens*	-	CSC	Dense riparian thickets for nesting and foraging.	May visit area during migration; not likely to nest onsite. Not observed onsite.

Federal Listing Categories:
T Federal Threatened
FSC Federal Species of Concern

State Listing Categories:
E California Endangered
T California Threatened
CSC California Species of Special Concern
CP California Protected

Source: EDAW 2003

SPECIAL-STATUS PLANTS

The CNDDB (CDFG 2003) does not include any occurrences of special-status plants for the vicinity of the project site. Based on the results of field surveys and the search of the CNDDB, no special-status plants are expected to occur on the project site.

SPECIAL-STATUS WILDLIFE

Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*); **Federally Listed as Threatened**. Suitable habitat for VELB consists of elderberry shrubs (*Sambucus mexicana*). Elderberry shrubs within riparian habitats are particularly important to this beetle. Adult beetles of this subspecies feed and lay eggs in elderberry stems. The larvae remain within the elderberry stems until they emerge through exit holes as adults. In accordance with the conservation guidelines published by USFWS (1999), the project site was surveyed for the presence of elderberry shrubs and for evidence of VELB.

The proposed project site, including proposed preservation areas, contain more than 400 elderberry shrubs. Areas slated to be mined in the future support 228 elderberry shrubs (149 shrubs within the currently permitted Phase 1 and 79 shrubs within Phases 2 through 5). Most of the elderberry plants are located on deep coarse sandy substrate and are associated with valley oak woodland habitat (Exhibit 12-1). Evidence of VELB (i.e., exit holes) was noted on three of the shrubs (Exhibit 12-1).

Central Valley Spring-run Chinook Salmon (*Oncorhynchus tshawytscha*); **Federally Listed and State Listed as Threatened**. **Central Valley Fall-run Chinook Salmon** (*Oncorhynchus tshawytscha*); **Federal Candidate and California Species of Special Concern.** Chinook salmon are known to occur in the Bear River. The lower Bear River was formerly designated as critical habitat by the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly known as the National Marine Fisheries Service [NMFS]) for both spring-run and fall-run chinook salmon. However, the U.S. District Court of Columbia approved a consent decree withdrawing this designation in 2002. A new critical habitat proposal for fall-run chinook salmon is currently under development. It is not known whether chinook salmon spawn in the project area.

Central Valley Steelhead Trout (*Oncorhynchus mykiss*); **Federally Listed as Threatened**. Steelhead trout are known to occur in the Bear River. The lower Bear River below Camp Far West Dam provides suitable habitat for this species. It is not known whether steelhead trout spawn in the project area.

California Black Rail (*Laterallus jamaicensis coturniculus*); **Federal Species of Concern, State Listed as Threatened, and California Protected**. Until recently, the black rail population in California was thought to be limited to scattered locations along the coast, around San Francisco Bay, in the Imperial Valley, and along the lower Colorado River. However, in the 1990s, a population was found in the foothills of the Sierra Nevada, primarily in Yuba County, east of Marysville. The foothill population is found in areas with dense cattails and a permanent source of water.

White-tailed Kite (*Elanus caeruleus*); **California Protected.** White-tailed kites are fairly common in the Central Valley and the surrounding foothills. Grasslands and agricultural areas are the primary foraging habitat. White-tailed kites typically nest in the tops of dense oak, willow, or other types of tree stands. This species was not observed onsite; however, it could potentially use the site for nesting and/or foraging.

Golden Eagle (*Aquila chrysaetos*); **California Species of Special Concern**. The golden eagle is an uncommon resident in this region. It requires secluded cliffs with overhanging ledges or large trees in open areas for nesting. This species was not observed during field surveys. Grassland habitat represents suitable foraging habitat. Golden eagles are not expected to nest on the project site.

Northern Harrier (*Circus cyanus)*; **California Species of Special Concern.** The northern harrier is found in a variety of open habitats in the vicinity of the project site. This species primarily nests in emergent wetland habitat, but may nest in uncut grasslands or grain fields. This species was not observed onsite, but the non-native grasslands onsite represent suitable foraging and nesting habitat.

Swainson's Hawk (*Buteo swainsoni*); **State Listed as Threatened**. The Swainson's hawk is a migratory species with a breeding range that includes much of the Central Valley. Swainson's hawks nest in tall trees, such as oaks, cottonwoods, walnuts, and willows, often near rivers or streams adjacent to suitable foraging habitat. Open fields and pastures may provide important foraging habitat for Swainson's hawks. The project site includes grasslands that are marginally suitable foraging habitat for this species. Suitable nesting sites are also present. However, no Swainson's hawks have been observed during surveys and there are no previously reported nesting attempts from the vicinity of the project site (CDFG 2003).

Cooper's Hawk (*Accipiter cooperii*); **California Species of Special Concern.** Cooper's hawk is a rare nesting species in the region but is relatively common during winter months. Cooper's hawks prefer dense stands of oak and riparian woodland for nesting and use these habitats and more open habitats for foraging. This species was observed onsite in a 1996 survey (Glazner 1996a). Cooper's hawks are expected to occur regularly on the project site during winter months and could nest onsite.

Sharp-shinned Hawk (*Accipiter striaus*); **California Species of Special Concern.** Sharp-shinned hawks winter regularly in this region of California from mid-September to mid-April. Suitable wintering habitat includes riparian woodland and coniferous, deciduous, or mixed forest. Sharp-shinned hawks could potentially winter onsite. The project site is outside of the species' normal nesting range.

Burrowing Owl (*Athene cunicularia*); **Federal Species of Concern and California Species of Special Concern**. These small owls inhabit grasslands and other open habitat. This year-round resident lives in small colonies and typically nests and roosts in burrow systems created by medium-sized mammals (e.g., ground squirrels), artificial sites (e.g., drainpipes, culverts), or it occasionally digs a burrow itself. No burrowing owls have been observed on the project site, and most of the site is unsuitable because of the rocky substrate, dense vegetation, and susceptibility to flooding.

Loggerhead Shrike (*Lanius ludovicianus*); **Federal Species of Concern and California Species of Special Concern.** Shrikes prefer open habitats with scattered shrubs, trees, posts, fences, or other perches, and nest in densely foliated trees or shrubs adjacent to open areas. The non-native grasslands onsite represent suitable foraging habitat and open woodlands represent suitable nesting habitat. This species was not found on the project site during field surveys.

Bank Swallow (*Riparia riparia*); **State Listed as Threatened**. Bank swallows can be found in central California from late April through September. Bank swallows require vertical cliffs and banks with fine-textured or sandy soil for nesting. A bank swallow colony (approximately 25 nesting pairs) was observed during a June 2000 field visit (North Fork Associates 2000a). The colony is located on the north site of the Bear River immediately adjacent to the currently active mining operation (Exhibit 12-1).

Tricolored Blackbird (*Agelaius tricolor*); **Federal Species of Concern and California Species of Special Concern.** The tricolored blackbird nests in large colonies in dense emergent marsh vegetation. Thickets of willow, blackberry, and other dense shrubs may also be suitable. No tricolored blackbirds have been observed on the project site. The project site includes a small amount of low-quality nesting

habitat. Onsite non-native grasslands provide foraging habitat for this species. This species was not found on the project site during field surveys.

Yellow-breasted Chat (*Icteria virens*); **California Species of Special Concern**. This species is an uncommon summer resident that occupies riparian habitats. It is present in central California from April through September. This species typically nests in dense, shrubby riparian vegetation, which is rare onsite. This species is expected to occur irregularly onsite during spring and fall migration periods. This species was not found on the project site during field surveys.

12.2 REGULATORY BACKGROUND

Many sensitive biological resources in California are protected and impacts on these resources are regulated by a variety of laws and policies. The proposed project would be required to demonstrate compliance with these regulations before implementation. Key regulatory issues that apply to the proposed mine expansion project are discussed below.

SENSITIVE HABITATS

Sensitive habitats include those identified as "rare and worthy of consideration" in the *List of California Terrestrial Natural Communities Recognized by the Natural Diversity Data Base* (CDFG 1999). Sensitive habitats also include those that are afforded specific consideration under the California Fish and Game Code and the federal Clean Water Act (CWA).

JURISDICTIONAL WATERS OF THE UNITED STATES (INCLUDING WETLANDS)

Waters of the United States are defined as waters whose use, degradation, or destruction could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or are adjacent to any of these waters or their tributaries. Most wetland habitats meet the definition of waters of the United States. USACE defines wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Waters of the United States are subject to §404 of the CWA. Section 404 establishes a requirement to obtain appropriate authorization before any activity involving discharges of dredged or fill material in waters of the United States. USACE may either issue individual permits on a case-by-case basis or authorize an activity under one or more of the nationwide permits (NWPs). NWPs are issued on a programmatic level to authorize certain types of fill activities that cause only minimal adverse effects on the aquatic environment. Projects involving wetland fill activities must comply with certain NWP terms and conditions to be eligible for authorization under the NWP program. One such condition requires project compliance with the federal ESA.

SECTION 1602 OF THE CALIFORNIA FISH AND GAME CODE

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources are subject to regulation by CDFG, pursuant

to California Fish and Game Code §§1600–1616. Section 1602 states that it is unlawful for any person, state or local governmental agency, or public utility to do any of the following without first notifying CDFG of such activity:

- substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake;
- use any material from the bed, bank, or channel of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports wildlife, fish, or other aquatic life. This includes watercourses having a surface or subsurface flow that support or have supported riparian vegetation. CDFG's jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife.

SPECIAL-STATUS SPECIES

Special-status species are defined in the Existing Conditions discussion above.

FEDERAL ENDANGERED SPECIES ACT

Pursuant to ESA, USFWS has regulatory authority over projects that take or jeopardize the continued existence of most federally listed species. Similarly, NOAA Fisheries has authority over projects that may take or jeopardize the continued existence of a federally listed anadromous fish species. Either an incidental "take" permit, pursuant to ESA §10(a), or an interagency consultation, pursuant to ESA §7, is required if a project may affect a federally listed species. Under ESA, the definition of take includes killing, harming, or harassing. USFWS has also interpreted the definition of harm to include significant habitat modification, if such modification would have an impact on individual members of the species.

In April 2001, the applicant provided a preconstruction notification to USACE requesting authorization pursuant to NWP 12 for fill activities associated with burial of the process water pipelines within the Bear River floodplain. The preconstruction notification included supporting information addressing the potential for impacts on species federally listed as Threatened or Endangered, species proposed for listing, or designated critical habitat. In July 2001, USACE initiated §7 consultation with NMFS regarding potential effects of the pipeline relocation on federally listed salmonid fish species within the Bear River. At the same time, USACE indicated that insufficient evidence exists to demonstrate a connection (i.e., nexus) between the work proposed under NWP 12 (i.e., pipeline relocation) and the potential impacts on VELB. USACE indicated that it would not initiate §7 consultation with USFWS regarding project-related impacts on VELB or its habitat.

On September 21, 2001, NMFS issued a letter stating, "Provided that a low flow work window of June 30 to October 30 is adhered to, NMFS believes that the Patterson Sand and Gravel pipeline project is

not likely to adversely affect listed or candidate salmonids or their critical habitat and essential fish habitat." The letter further states, "[S]hould new information indicate that the project may effect these species in an unforeseen manner, further consultation might be necessary."

In the fall of 2003, Patterson Sand & Gravel decided to implement a demonstration project involving the reclaimed pond located in the northeastern portion of the currently permitted mine site (see Exhibit 12-1). The applicant's intent is to demonstrate the potential for restoring habitats after the cessation of quarrying. The demonstration project involves excavation of the eastern edge of the pond below the current ordinary high water mark of the pond. Excavated areas would vary in depth so that emergent marsh vegetation would grow in the shallow areas and open water would occupy the deepest areas, creating a mosaic of habitats for wildlife (Anderson, pers. comm., 2004).

The demonstration project would affect 6 elderberry shrubs, none of which show evidence of VELB. In September 2003, the applicant submitted to USACE a revised wetland delineation and a preconstruction notification requesting authorization pursuant to NWP 27 which authorizes the discharge of dredged or fill materials in waters of the United States associated with certain wetland restoration activities. Along with the preconstruction notification, the applicant requested the USACE to initiate §7 consultation with the USFWS for VELB impacts on the entire project site triggered by the demonstration project's removal of the 6 elderberry shrubs (Anderson, pers. comm., 2004). If USACE declines to initiate §7 consultation with the USFWS for VELB impacts, the proposed mine expansion project would require an incidental take permit for VELB pursuant to the ESA §10(a) process.

CALIFORNIA ENDANGERED SPECIES ACT

Pursuant to CESA, a permit from CDFG is required for projects that could result in the take of a species that is state listed as Threatened or Endangered. Under CESA, "take" is defined as an activity that would kill an individual of a species. Unlike the federal ESA, CESA does not define take to include harming or harassment. As a result, the definition of take under CESA does not include habitat modification alone. An activity that would be considered take under ESA based solely on habitat modification would not be considered take under CESA.

OTHER LAWS, PLANS, POLICIES, AND ORDINANCES

SMARA, the Placer County Tree Ordinance, the Placer County General Plan, and the Yuba County General Plan address the need to minimize and compensate for impacts on biological resources. Applicable requirements are presented below.

Surface Mining and Reclamation Act

SMARA provides the regulatory framework and direction for comprehensive surface mining and reclamation operations in the state of California, and is aimed at minimizing or preventing adverse environmental effects and ensuring that mined lands are reclaimed to a useable and productive condition. The California Code of Regulations (CCR) includes SMARA regulations promulgated by

the State Mining and Geology Board (SMGB) particularly in relation to reclamation plans, mineral resource management, and financial assurances.

Section 3502(b) of Title 14 of the California Code of Regulations specifies required components of the reclamation plan beyond SMARA mandates. Section 3503 of Title 14 of the California Code of Regulations defines the minimum acceptable practices to be followed in surface mining operations related to soils erosion control, water quality and watershed control, protection of fish and wildlife habitat, disposal of mine waste rock and overburden, erosion and drainage, resoiling, and revegetation.

Sections 3504(b) and 3702 of Title 14 of the California Code of Regulations both require provision of financial assurances by mining/reclamation proponents to ensure that reclamation is performed in accordance with the approved reclamation plan.

Placer County Tree Ordinance

Chapter 12.16 of the Placer County Code regulates development on land with trees protected by the Placer County Tree Ordinance. General countywide requirements are described under Article 12.16.030. This article includes specific requirements for riparian zones and canopy retention standards.

Under this article, no tree permit or discretionary approval for any development activity within a riparian zone shall be approved until environmental impacts within the riparian zone are identified, an environmental determination is made, and mitigation measures are identified. Additionally, no development activity shall be permitted until any stream alteration agreement or mitigation agreement required by CDFG has been completed. This is not a categorical prohibition on any tree removal within a riparian zone, but rather a requirement for review of proposed development activity and approval of a tree permit or discretionary project before such disturbance occurs.

The article also limits removal of tree canopy cover. Except for developed, single-family lots that cannot be subdivided, the removal of more than 50 percent of existing native trees, 6 inches diameter at breast height (dbh) or greater shall be subject to the issuance of a tree permit. Failure to obtain a permit before the removal of more than 50 percent of the existing trees in these areas may result in denial or deferral of any application for development of that property for a period of up to 10 years.

A detailed discussion of applicable Placer County General Plan policies, including an analysis of the project's consistency with these policies, is provided in Chapter 4, Land Use/Agriculture.

Yuba County General Plan

The Yuba County General Plan contains certain policies that address protection of biological resources. A detailed discussion of applicable Yuba County General Plan policies, including an analysis of the project's consistency with these policies, is provided in Chapter 4, Land Use/Agriculture.

12.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFG or USFWS;
- have a substantial adverse effect on federally protected wetlands as defined by §404 of the federal CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

PROJECT IMPACTS

Impact **12-1**

Loss of Sensitive Habitats. *The phased excavation for production of sand and gravel would result in the loss of sensitive habitats, including valley oak woodland and riparian woodland. The aquatic habitat associated with the Bear River is also considered sensitive but is outside of the proposed expansion area. The 365-acre proposed expansion area would result in phased removal of 101 acres of oak woodland that supports approximately 2,600 oak trees. Most of the oak woodland is valley oak woodland, which is a sensitive plant community. The expansion area also includes approximately 3 acres of riparian woodland. This impact is considered* ***significant****.*

The proposed project would expand the currently permitted mining area by approximately 365 acres, and would result in phased removal of approximately 101 acres of oak woodland (approximately 2,600 oak trees). The large majority of oak woodland on the project site is considered valley oak woodland. Phase 2 would remove approximately 39 acres of oak woodland (718 oak trees), Phase 3 would remove approximately 40 acres (1,110 oak trees), Phase 4 would remove approximately 15 acres (502 trees), and Phase 5 would remove approximately 7 acres (267 trees). No oak trees would be removed during

Phase 6. The proposed project would also result in the removal of 3 acres of riparian woodland in Phase 5.

Valley oak woodland and riparian woodland are considered sensitive habitats by CDFG. The Placer County General Plan, Yuba County General Plan, and Placer County Tree Protection Ordinance also address protection of oak woodland and riparian habitat. Riparian wetland habitat that meets USACE's definition of waters of the United States is protected under §404 of the CWA. Valley oak woodland and riparian woodland are sensitive because the distribution of these habitats has declined drastically throughout California over the last century. These habitats also warrant protection because they support high wildlife diversity. The statewide decline has been a result of flood control projects, agricultural land conversion, and urban development. Valley oak woodland and riparian woodland within the bed or bank of rivers and streams receive legal protection from CDFG pursuant to §1602 of the California Fish and Game Code.

The Placer County General Plan states that "the County shall strive to identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species" (Policy 6.B.4). Policy 6.C.1 of the Placer County General Plan states that "the County shall identify and protect significant ecological resource areas [including stream environment zones, riparian, and oak woodland] and other unique wildlife habitats critical to protecting and sustaining wildlife populations." Policy 6.D.3 of the Placer County General Plan states that "the County shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools."

Policy 106-OSCP of the Yuba County General Plan specifically addresses habitat along the Bear River by stating that "the County shall encourage the retention of natural vegetation and open space areas along the Yuba, Bear, and Feather rivers."

Removal of native trees is regulated by the Placer County Tree Preservation Ordinance. Compliance with this ordinance requires a tree permit for removal of protected trees, as defined in the ordinance. Placer County may require replacement of trees in kind or implementation of a revegetation plan as a condition of any tree permit or discretionary approval, involving removal of a protected tree.

The proposed project includes trenching and backfilling to bury a section of the process water conveyance pipes. Approximately 400 feet of the pipes would be buried within the northern floodplain of the Bear River near the bridge. Trenching and backfilling to bury the pipes would not affect wetland or riparian habitat. North Fork Associates has stated that this portion of the floodplain does not support wetlands, but is located within the ordinary high-water mark of the Bear River and is, therefore, considered waters of the United States (Glazner, pers. comm., 2001). On September 27, 2001, USACE issued authorization to bury the pipes pursuant to NWP 12 (Utility Line Activities). The floodplain supports ruderal upland plant species, and does not appear to support wetlands subject to §404 of the CWA, nor does it support riparian vegetation protected by §1602 of the California Fish and Game Code. The Placer and Yuba County general plans support the "no net loss" policies of USACE and CDFG. These policies generally apply, however, to wetlands and to riparian areas. Pursuant to their respective authorities, USACE and CDFG may determine that the pipeline work

requires project-specific authorization. Because burial of the pipes would not affect wetland or riparian habitat, however, and because it would not result in permanent adverse impacts on either the floodplain or the Bear River, this component of the project would result in a short-term, less-than-significant impact pursuant to CEQA.

Because sensitive habitats on the project site are protected by state and federal laws, local policies, and ordinances, the removal of 101 acres of valley oak-dominated woodland and 3 acres of riparian woodland would be considered significant. Therefore, this impact is considered significant.

Impact **12-2**

Adverse Effects on Potential Spawning Habitat of Special-status Salmonids*. Three special-status salmonids are known to occur in the Bear River: Central Valley spring-run chinook salmon, Central Valley fall-run chinook salmon, and Central Valley steelhead trout. The proposed mining operation would be limited to areas outside of the ordinary high-water mark of the Bear River, so no direct impacts on salmonid habitat are expected. However, implementation of the proposed project could have indirect impacts on protected salmonids such as increased sedimentation in potential spawning areas. This impact is considered* ***potentially significant****.*

The lower Bear River below Camp Far West Dam provides suitable habitat for Central Valley spring-run chinook salmon, Central Valley fall-run chinook salmon, and Central Valley steelhead trout. All three of these anadromous species could occur in the project area, but it is not known whether the project area is used for spawning.

The proposed project would not impede the migration of any special-status fish or result in direct impacts on any special-status fish because no work is proposed within the Bear River. Movement of aggregates and fines from mining areas to storage and loading areas south of the river could result in accidental spillage into the Bear River that could adversely affect spawning beds for steelhead and chinook salmon. However, this type of material movement now occurs as part the currently permitted mining operation. Continuation of this activity under the proposed project, therefore, would not result in a significant impact on listed salmonids.

However, potential spawning areas in the project area and downstream of the project area could be adversely affected by the proposed relocation of the mine's water pipes within the Bear River floodplain. These proposed construction activities could result in accidental spillage into the Bear River. Anadromous fish receive federal protection under ESA; protection of anadromous fish species is also addressed in the Placer and Yuba County general plans. On September 21, 2001, the NMFS provided a letter to the USACE stating that if the pipeline relocation project were conducted during the low flow season between June 30 and October 30, it would not have an adverse effect on listed salmonids (Appendix H). The proposed project does not include a specific seasonal restriction on the pipeline relocation activities. If these activities were to occur outside the low flow season, the accidental spillage of sediment into the Bear River could adversely affect listed salmonids. Therefore, this impact is considered potentially significant.

Impact **12-3**

Loss of Nesting Habitat for Raptors. *Active raptor nests could be affected by the removal of large trees and nearby mining, reclamation, and construction activity during the breeding season (February 1–August 31). This impact is considered* ***potentially significant****.*

Implementation of the proposed project could result in the loss or disturbance of active raptor nests, which are protected under the California Fish and Game Code. Large trees within the project site could be used for nesting by Swainson's hawk, Cooper's hawk, red-tailed hawk, red-shouldered hawk, great horned owl, and white-tailed kite. Grasslands onsite could be used for nesting by northern harrier and burrowing owl. In addition to the potential for direct removal, noise, vibration, and other disturbance resulting from mining, reclamation, or construction, activities could affect the success of active nests. This impact is considered potentially significant.

Impact **12-4**

Loss of Valley Elderberry Longhorn Beetles and Their Habitat. *Implementation of the proposed project would result in the loss of elderberry shrubs that could provide habitat for VELB. A total of 228 elderberry shrubs would be removed from Phase 1 and the proposed expansion area over the next 55 years. Three of the affected elderberry shrubs show evidence of VELB. This impact is considered* ***significant****.*

Elderberry shrubs within the project site are considered potential habitat for VELB, which is federally listed as Threatened. There are more than 400 elderberry plants on the project site; a total of 228 elderberry shrubs would be removed over the next 55 years. Of these, 149 shrubs would be removed from Phase 1 (currently permitted operation). In the proposed expansion area, 79 elderberry shrubs would be removed in Phases 2 through Phase 5. Three of the affected elderberry shrubs show evidence of VELB; 1 shrub in Phase 1 and 2 shrubs in Phase 5. This impact is considered significant.

Impact **12-5**

Potential for Injury or Mortality of Western Pond Turtle, California Black Rail, Loggerhead Shrike, Tricolored Blackbird, and Yellow-breasted Chat, or Loss of Habitat. *Several special-status species—western pond turtle, California black rail, loggerhead shrike, tricolored blackbird, and yellow-breasted chat—have been identified as potentially occurring on the project site but are not expected to be significantly affected by the proposed project. None of these species are federally listed as Threatened or Endangered. The black rail, which is state listed as Threatened, is the only state-listed species. The project site is not expected to provide important foraging or breeding habitat for any of these species. Implementation of the proposed project is not expected to result in direct injury or mortality of any of these special-status species. This impact is considered* ***less than significant****.*

The project site includes potential habitat for western pond turtle, California black rail, loggerhead shrike, tricolored blackbird, and yellow-breasted chat. Western pond turtles could occur in the freshwater pond at the eastern portion of the project site. This area is located within the Bear River Preservation Corridor. It is also possible that western pond turtles could occur in the Bear River, but the fast flows and lack of emergent marsh and riparian vegetation are inconsistent with higher quality pond turtle habitat. The lack of large stands of emergent marsh and riparian vegetation is also inconsistent with higher quality breeding habitat for tricolored blackbird and yellow-breasted chat. Tricolored blackbirds could forage on the site, but similar quality foraging habitat is common in the project vicinity. Yellow-breasted chat may visit the site in low numbers during their spring and fall migration periods. California black rails are known to breed in some foothill locations, but the project site does not support the mixture of emergent marsh and grassland habitat that is typical of occupied black rail habitat in the region. Loggerhead shrikes could breed and forage on the project site in low

densities; however, higher quality loggerhead shrike habitat (e.g., open grasslands with scattered trees and shrubs) is common in the project vicinity.

The project is not expected to result in the loss of western pond turtle, California black rail, loggerhead shrike, tricolored blackbird, or yellow-breasted chat. The project would not result in a substantial loss of foraging or breeding habitat for any of the species. Therefore, this impact is considered less than significant.

Impact **12-6**

Potential Effects of Methyl Mercury on Special-status Fish and Wildlife Species. *Mercury in surface and subsurface waters and sediment at the project site and within the Bear River watershed presents the potential for production and bioaccumulation of methyl mercury. The proposed lake could present conditions favorable to the formation and bioaccumulation of methyl mercury. No substantial evidence exists to analyze the project's effects on special-status fish and wildlife related to the production of methyl mercury. This effect is too speculative to evaluate and is therefore considered* ***less than significant.***

The draft mine reclamation plan includes approximately 315 acres of lakes, including the construction of a 300-acre privately owned off-channel lake, as well as preservation of the 15-acre existing lake near the eastern portion of Phase 1. The current mine reclamation plan includes reclamation of approximately 240 acres of lakes and ponds. This represents a proposed increase of approximately 75 acres of reclaimed open water beyond the current plan. As discussed in Impact 11-9 in Chapter 11, Water Resources, of this EIR, the proposed lake may present conditions favorable to the formation of methyl mercury. With time, organically rich sediments would accumulate at the bottom of the lake and could create anaerobic conditions. Methyl mercury produced in this environment could be metabolized by lower trophic organisms, and could then be consumed by increasingly higher trophic forms. Bioaccumulation can occur within individual organisms, and can be biomagnified within the food chain.

At high doses, methyl mercury can affect the nervous system of humans. Methyl mercury is not known, however, to adversely affect the health or reproductive success of special-status fish species in the natural environment, and very little scientific analysis has been conducted to assess methyl mercury's potential effects on fish-eating wildlife in the natural environment. According to the U.S. Environmental Protection Agency (EPA), the effects of mercury on the ecosystem are not completely understood (EPA 1998). EPA states that "additional work [by the scientific community] is required to establish whether and to what extent impacts are occurring, and what effect local-scale impacts may have on larger species populations."

No substantial evidence exists to analyze the project's effects on special-status fish and wildlife related to the production of methyl mercury; therefore, this effect is too speculative to evaluate. According to §15145 of the State CEQA Guidelines, "If, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." The conclusion of this EIR, therefore, is that this impact is considered less than significant.

12.4 MITIGATION MEASURES

No mitigation measures are necessary for the following *less-than-significant* impacts.

12-5: Potential for Injury or Mortality of Western Pond Turtle ,California Black Rail, Loggerhead Shrike, Tricolored Blackbird, and Yellow-breasted Chat, or Loss of Habitat

12-6: Potential Effects of Methyl Mercury on Special-status Fish and Wildlife Species

Mitigation measures are provided below for *significant* or *potentially significant* impacts of the proposed project.

Mitigation Measure P12-1: Implement Conceptual Biological and Woodland Mitigation Plan. The applicant shall implement the biological mitigation plan and conceptual woodland mitigation plan prepared by North Fork Associates for the proposed mine expansion area (Appendix H), but updated to include the 5 acres of wetland expansion/enhancement proposed in the draft mine reclamation plan (North Fork Associates 2001b) (Carlton Engineering, Inc., 2003). The intent of these plans is to establish the mitigation framework for the ongoing reclamation of the site and to provide the basic mitigation/reclamation program for this EIR. Compensation for impacts on existing habitats shall be implemented incrementally in advance of actual impacts to minimize temporal losses of habitat. Key elements of the mitigation plans are outlined below.

- The basic concept of the proposed mitigation plans is to create a valley oak–riparian woodland along the north side of the Bear River concurrent with future mining activity. The reclaimed habitat shall consist predominantly of valley oak but shall also contain numerous native associate species, including interior live oak, foothill pine, cottonwood, white alder, Oregon ash, and other riparian components. The woodland mitigation plan includes approximately 7,428 living oak trees on 212 acres at the end of the 60-year project. Trees shall be planted in five-year increments, beginning within 1 year of project approval with an initial planting of 773 trees, as described in the woodland mitigation plan.

  The restoration plan also includes establishing emergent marsh and riparian woodland in the mitigation area. At least 6 acres of riparian woodland shall be established. Emergent marsh vegetation shall be allowed to volunteer naturally on 53 acres of permanently inundated margin of a 300-acre lake that shall be the end use of an area in the western portion of the site. The draft mine reclamation plan also proposes 5 acres of wetland enhancement and expansion in the eastern portion of Phase 1 (Carlton Engineering, Inc., 2003).

- The mitigation plans includes performance standards for all compensatory habitat, that shall be achieved:

  Oak Woodland/Oak Savanna/Riparian: 80 percent survivability of trees, 50 percent survivability of native shrub species planted among the oaks.

  Riparian Woodland: Establishment of a minimum of 6 acres of riparian woodland containing hydrophytic species in all strata (herb, shrub, subcanopy, and canopy).

Emergent Marsh: Establishment of emergent marsh vegetation along the lake fringe to an average width of at least 20 feet from the toe of the adjacent slope.

Elderberry Habitat: Per permit guidelines set forth in the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999). These guidelines include the following requirements:

- Before commencement of project activities, an elderberry shrub survey shall be conducted by a qualified biologist. For elderberry shrubs to be avoided, a 100-foot buffer shall be established around elderberry shrubs with stems greater than 1 inch diameter at ground level and shall be clearly identified in the field by staking or flagging. No project activity shall occur within the buffer areas except for plants that are being relocated.
- Mitigation of impacts on VELB may include, but not necessarily be limited to, implementation of reduced buffers around shrubs that would not be removed, transplanting shrubs to a conservation area, and planting additional seedling or cuttings at a ratio ranging from 1:1 or 1:6, depending on the number of stems greater than or equal to 1 inch and on whether beetle exit holes are found on the shrubs onsite.

Open Water: Approximately 247 acres of open water (approximately 53 acres of emergent marsh would compose the rest of the 300-acre lake).

- Four preservation areas, totaling 193 acres, shall be maintained throughout the mining operation, including three areas that support oak woodland. The fourth area shall protect a corridor along the Bear River.

Mitigation Measure R12-1: Implement Mitigation Plan for Loss of Sensitive Habitats and Monitor Compliance. The applicant shall implement the following mitigation measures to further reduce impacts on sensitive habitats on the project site and to comply with the Yuba County and Placer County general plans and the Placer County Tree Preservation Ordinance.

- Before initiation of mining in Phase 2, the conceptual woodland mitigation plan (North Fork Associates 2004) shall be revised and expanded to include detailed information for proposed mitigation of the loss of sensitive habitat for each phase of mining within the Yuba County (Phases 3 and 4). The detailed mitigation plan shall identify the percentage of existing canopy cover of oak woodland in these phases of the proposed expansion area.

  The percentage of canopy cover to be retained within the Yuba County portion of the project area, including permanent open-space areas, shall be calculated based on the standards required by the Yuba County General Plan, as shown below.

Existing Canopy Cover Including Permanent Open-Space Areas	Percent Canopy Cover to be Retained with the Project, Including Permanent Open-Space Areas

80–100 percent	60 percent of existing canopy
60–79 percent	70 percent of existing canopy
40–59 percent	80 percent of existing canopy
20–39 percent	85 percent of existing canopy
19 percent or less	90 percent of existing canopy

- The detailed mitigation plan shall include information on all specific criteria necessary to implement the mitigation plan. Details shall include information on specific plant palettes, irrigation plans, planting schedules, and planting techniques. The detailed mitigation plan shall also include specific information related to an annual monitoring program that shall occur for a minimum of 5 years after each phase of planting. If in any year of the 5-year period, fewer than 80 percent of the compensation plantings are alive and vigorous, replacement planting shall be performed to raise the survival rate to 80 percent. Before initiation of mining in the proposed expansion areas, the detailed mitigation plan shall be submitted to CDFG and the Placer and Yuba County planning departments for review and approval. Should the reviewing agencies express any concerns in writing following their review, the plan shall be revised to address those concerns, and the applicant shall obtain approval from all three of these agencies before project approval.
- A letter of credit or cash deposit in the amount of 125 percent of the cost to monitor shall be deposited with the Placer County Planning Department to ensure performance of the monitoring program. Evidence of this deposit shall be provided to the satisfaction of the Placer County Development Review Committee (DRC). Violation of any components of the approved monitoring program may result in enforcement activity in accordance with the Placer County Environmental Review Ordinance §18.28.070.
- Annual monitoring reports shall be submitted to CDFG and the Placer and Yuba County planning departments for a minimum of 5 years after each phase of planting. The project applicant shall obtain the services of a qualified professional to serve as a compliance monitor and to ensure that all mitigation measures pertaining to the mitigation plan are properly implemented.

The following mitigation measure is recommended to further reduce impacts on riparian habitat:

- Before the start of construction activities (i.e., asphalt batch plant, levee extension) or mining of the expansion phases, the applicant shall provide evidence to the Placer County Planning Department that the mine is in compliance with §1602 of the California Fish and Game Code. Evidence may include, but not be limited to, a §1602 Streambed Alteration Agreement or other written evidence to the satisfaction of the Placer County Planning Department.

The following mitigation measure is recommended to permanently protect the reclaimed and preserved sensitive habitats:

- The applicant shall establish permanent conservation easements on the preserved and reclaimed onsite sensitive habitat areas including the oak and riparian restoration areas, oak preservation areas, elderberry habitat mitigation areas, and the Bear River corridor preservation area that include public access as part of the easement. As an alternative to providing onsite conservation easements, the applicant has the option to either purchase offsite property within Placer County in fee or obtain offsite conservation easements over property within Placer County. The onsite or offsite conservation areas shall be established by a recorded easement or other instrument subject to the approval of Placer County Planning Department. The applicant shall guarantee the maintenance of the land in a safe and orderly manner through a recorded easement or financial assurance.

Mitigation Measure R12-2: Relocate Pipeline During Low Flow Season to Protect Special-status Salmonids. The applicant shall not perform the proposed pipeline relocation activities during the river's high flow period between November 1 and June 30.

Mitigation Measure R12-3: Implement Restrictions to Protect Raptor Nests. The applicant shall implement the following mitigation measures to reduce impacts on nesting raptors:

- Before tree removal and grading in any new mining area, a determination shall be made by a qualified biologist as to whether grading or tree removal is proposed during the raptor nesting season (February 1–August 31). If no grading or tree removal is scheduled to occur during the raptor nesting season, no further mitigation shall be necessary.
- If grading or tree removal is proposed during raptor nesting season, a focused survey for raptor nests shall be conducted by a qualified biologist during the nesting season to identify active nests within the new mining area. The survey shall be conducted no fewer than 14 days, and no more than 30 days, before the beginning of grading or tree removal. The results of the survey shall be summarized in a written report to be submitted to CDFG before the beginning of grading.
- If nesting raptors are found during the focused survey, no grading or tree removal shall occur within 500 feet of an active nest until the young have fledged (as determined by a qualified biologist), or until the project applicant receives written authorization from CDFG to proceed. If nest trees are unavoidable, they shall be removed during the nonbreeding season when the nests are inactive.

Mitigation Measure P12-4: Implement Valley Elderberry Longhorn Beetle Mitigation Plan. The VELB Implementation Plan (North Fork Associates 2000b) (Appendix H) shall be implemented by the applicant incrementally before construction or mining is permitted in any of the mine expansion phases with VELB impacts. Key elements of the VELB Implementation Plan are outlined below.

- Existing elderberry shrubs shall be transplanted and seedlings and associated native plants shall be planted in accordance with USFWS guidelines (USFWS 1999), as summarized below:

  - Proposed project sites within the range of the VELB should be surveyed by a qualified biologist for the presence of the beetle and its elderberry host plant. All elderberry shrubs within 100 feet of the proposed project (where the applicant has access to the property) should be mapped.

  - All elderberry shrubs with one or more stems measuring 1.0 inch or greater in diameter at ground level must be thoroughly searched for beetle exit holes (external evidence of beetle presence). In addition, all elderberry stems 1 inch or greater in diameter at ground level must be tallied by diameter size class.

  - The numbers of elderberry seedlings/cuttings and associated riparian native trees/shrubs to be planted as replacement habitat are determined by stem size class of affected elderberry shrubs, presence or absence of exit holes, and whether a proposed project lies in a riparian or nonriparian area.

- A 15-acre elderberry mitigation site shall be established at the east end of the project site. The mitigation site shall be used to transplant 228 elderberry shrubs from the proposed expansion site. A total of 1,068 elderberry seedlings and 770 seedlings of associated species shall also be planted. Associated species may include California buckeye, whiteleaf manzanita, coyote bush, Oregon ash, California black walnut, Fremont's cottonwood, foothill pine, valley oak, interior live oak, California rose, coffeeberry, sandbar willow, arroyo willow, poison oak, and/or California grape.

- The elderberry mitigation site shall be maintained in perpetuity. The applicant shall provide a deed restriction, conservation easement, or deed transfer to a resource agency or private organization for preservation and management. An official, recorded copy of the deed restriction, conservation easement, or deed transfer along with supporting documents outlining the details of the conservation program shall be submitted to USFWS before project initiation. Adequate funds shall be set aside to guarantee that the conservation area is maintained in perpetuity. The applicant shall provide USFWS with documentation stating that a dedicated fund has been set up for long-term management and maintenance.

- The mitigation area, elderberry plants, and native species plantings shall be monitored over a 15-year period to ensure the success of the mitigation plan. Surveys shall be conducted in years 1, 2, 3, 5, 7, 10, and 15. Personnel from USFWS and CDFG shall be given access to the conservation area, in compliance with OSHA and Mine Safety and Health Administration (MSHA) requirements, to monitor the site. The surveying biologist shall submit a written report to the Placer County Planning Department, USFWS, and CDFG for each year specified in the monitoring schedule. The report shall include a description of all beetle activity, the condition and survival rates of elderberry plants and associated native plants, the

number and location of VELB and exit holes observed, an assessment of potential challenges to the conservation area, and suggestions for possible remedies. Success criteria shall include a minimum survival rate of 60 percent for both the entire monitoring period and every year in the monitoring period. The applicant shall replace any failed plantings to maintain a 60 percent survival rate, during the 15-year monitoring period.

- Before the start of new mining activities associated with the proposed expansion project, the applicant shall consult with USFWS to ensure compliance with ESA and to obtain incidental take authorization for the loss of occupied habitat for VELB. If through consultation USFWS identifies additional mitigation measures necessary for compliance with ESA, these measures shall be implemented on a schedule identified by USFWS.

A letter of credit or cash deposit in the amount of 125 percent of the cost to monitor shall be deposited with the Placer County Planning Department to ensure performance of the monitoring program. Evidence of this deposit shall be provided to the satisfaction of the Placer County DRC. Violation of any components of the approved monitoring program may result in enforcement activity in accordance with the Placer County Environmental Review Ordinance §18.28.070.

12.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the above mitigation measures, all potential impacts related to biological resources would be reduced to a *less-than-significant* level.